

## Experiment-12

12. The main function of the Intermediate code generation is producing three address code statements for a given input expression. The three address codes help in determining the sequence in which operations are actioned by the compiler. The key work of Intermediate code generators is to simplify the process of Code Generator. Write a C Program to Generate the Three address code representation for the given input statement.

Program:

```
#include <stdio.h>
```

```
int main() {
```

```
    char op, operand1, operand2, result;
```

```
    // Input statement: result = operand1 + operand2
```

```
    printf("Enter the input statement (e.g., result =  
operand1 + operand2): ");
```

```
    scanf("%c = %c %c %c", &result, &operand1, &op,  
&operand2);
```

```
    // Generate Three Address Code
```

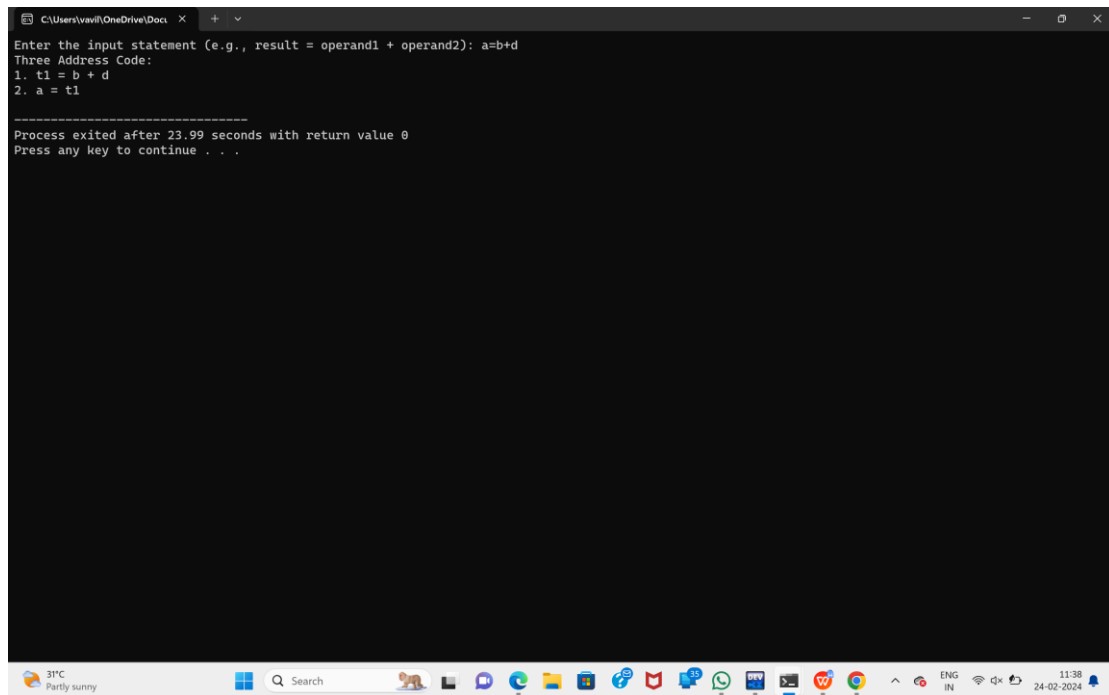
```
    printf("Three Address Code:\n");
```

```
    printf("1. t1 = %c %c %c\n", operand1, op, operand2);
```

```
    printf("2. %c = t1\n", result);
```

```
    return 0;  
}
```

Output:



The screenshot shows a Windows terminal window with a dark background. The title bar at the top reads "C:\Users\wavi\OneDrive\Doc...". The terminal content is as follows:

```
Enter the input statement (e.g., result = operand1 + operand2): a=b+d  
Three Address Code:  
1. t1 = b + d  
2. a = t1  
  
-----  
Process exited after 23.99 seconds with return value 0  
Press any key to continue . . .
```

The Windows taskbar is visible at the bottom, showing the weather as 31°C Partly sunny, a search bar, and various application icons. The system clock in the bottom right corner displays 11:38 on 24-02-2024.